CLAIMS

1. Process for the detection of hydrocarbons other than methane in a gas predominantly or essentially comprising oxygen, as well as methane and the said hydrocarbons other than methane, the said process comprising:

- a stage of detection of the combined hydrocarbons in the said gas, providing a first value for the combined hydrocarbons,

- a stage of combustion of the hydrocarbons other than methane,

- a stage of detection of methane in the said gas, providing a second value,

- a stage of calculation of the amount of hydrocarbons other than methane by the difference between the first value and the second value.

2. Process according to Claim 1, the said gas comprising at least 95%, preferably at least 99 % or 99.5 % of oxygen.

3. Process according to Claim 1 or 2, the said gas predominantly or essentially comprising oxygen, methane and hydrocarbons other than methane, the said hydrocarbons other than methane being present, with respect to the methane, in a proportion of the order of a few percent.

4. Process according to Claim 3, the said hydrocarbons other than methane being present, with respect to the methane, in a proportion of less than 6% or than 5% or than 4% or than 3%.

5. Process according to Claim 3 or 4, the said gas comprising less than 50 ppm of methane.

6. Process according to one of Claims 3 to 5, the said hydrocarbons other than methane being present at a concentration of less than 5 ppm in the oxygen.

7. Process according to one of Claims 1 to 6, the hydrocarbons other than methane being incinerated by a catalyst (6).

8. Process according to Claim 7, the detection being carried out by a flame ionization detector (8).

9. Process according to Claim 7 or 8, hydrogen being mixed with the gas to be analysed, so that the hydrogen/oxygen ratio is between 10% and 40%.

10. Process according to one of Claims 7 to 9, in which the temperature of the catalyst is such that less than 5% of the methane present in the gas is incinerated.

11. Process according to Claim 10, the temperature of the catalyst being between 160°C and 190°C.

12. Process for the detection of hydrocarbons other than methane in a liquid oxygen bath (63) of an evaporator of a unit for the production of gases from the air, comprising:

- a withdrawal of a sample of liquid oxygen from the said bath (63),
- an evaporation of the said liquid oxygen, producing an evaporated gas,
- a process for the detection of hydrocarbons other than methane in the said evaporated gas, according to one of Claims 1 to 11.

13. Process according to Claim 12, the withdrawal of the sample being carried out using a pipe of a pump (70) for raising liquid or over a sampler (61) of lift type.

14. Process according to either of Claims 12 and 13, additionally comprising a stage of triggering an alarm when the concentration or the level of hydrocarbons other than methane in the said evaporated gas exceeds a certain limit value.

15. Device for the detection of hydrocarbons other than methane in a gas predominantly or essentially comprising oxygen, as well as methane and the said hydrocarbons other than methane, the said device comprising:

- means (8) for the detection of the combined hydrocarbons in the said gas, providing a first value for the combined hydrocarbons,

- means (6) for the combustion of the hydrocarbons other than methane,

- means (8) for the detection of methane, providing a second value,

- means (7) for the calculation of the amount of hydrocarbons other than methane by the difference between the first value and the second value.

16. Device according to Claim 15, the means for the combustion of the hydrocarbons other than methane comprising a catalyst (6).

17. Device according to Claim 15 or 16, the means for the detection of the combined hydrocarbons and the means for the detection of methane comprising a flame ionization detector (8).

18. Device for the detection of hydrocarbons other than methane in a liquid oxygen bath of an evaporator of a unit for the manufacture of gases from the air, comprising:

- means (61, 62, 70) for the withdrawal of a sample of liquid oxygen from the said bath,

- means (64, 72) for the evaporation of the said liquid oxygen, producing an evaporated gas,

- a detection device (10) according to one of Claims 15 to 17.

19. Detection device according to Claim 18, additionally comprising means for triggering an alarm when the concentration or the level of hydrocarbons other than methane in the said evaporated gas exceeds a certain limit value.